

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

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NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

Date of mailing
(day/month/year)

23.11.2005

Applicant's or agent's file reference
PAM-019-PCT

IMPORTANT NOTIFICATION

International application No.
PCT/EP2004/013526

International filing date (day/month/year)
29.11.2004

Priority date (day/month/year)
28.11.2003

Applicant
PAMGENE B.V. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

| | | | | |
|---|--|---|---|---|
| Applicant's or agent's file reference PAM-019-PCT | | FOR FURTHER ACTION | | See Form PCT/PEA/416 |
| International application No. PCT/EP2004/013526 | | International filing date (<i>day/month/year</i>) 29.11.2004 | | Priority date (<i>day/month/year</i>) 28.11.2003 |
| International Patent Classification (IPC) or national classification and IPC G01N33/543 | | | | |
| Applicant PAMGENE B.V. et al. | | | | |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> <i>sent to the applicant and to the International Bureau</i>) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> | | | | |
| <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p> | | | | |
| Date of submission of the demand 28.09.2005 | | | Date of completion of this report 23.11.2005 | |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | | | Authorized Officer Moreno de Vega, C Telephone No. +49 89 2399-7486  | |

INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITYInternational application No.
PCT/EP2004/013526

AP20 Rec'd PCT/PTO 18 MAY 2006

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-39 as originally filed

Claims, Numbers

1-54 as originally filed

Drawings, Sheets

1/5-5/5 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/013526

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | 1-54 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | 1-54 |
| | No: Claims | |
| Industrial applicability (IA) | Yes: Claims | 1-54 |
| | No: Claims | |

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/EP2004/013526

AP20 Rec'd PCT/PTO 18 MAY 2006

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: US-A-6 103 479 (CELLOMICS, INC) 15 August 2000 (2000-08-15)
- D2: US-A-6 197 575 (MASSACHUSETTS INSTITUTE OF TECHNOLOGY) 6 March 2001 (2001-03-06)
- D3: WO 01 45843 A (GENE LOGIC INC) 28 June 2001 (2001-06-28)
- D4: US-B1-6 225 131 (AKZO NOBEL) 1 May 2001 (2001-05-01)

Document D1 (see especially column 6 lines 48-67, column 8 lines 34- 57 column 13 lines 5-56, and claims 1-5) discloses devices and methods of performing high throughput screening of the physiological response of cells to biologically active compounds, comprising a fluid delivery system for delivering a combinatorial of reagents to the ordered array of cell types. D1 does not disclose a support having cells on its surface and a supply chamber opposite to said cells, nor a device and a supply chamber to deliver to a porous support having multiple insertions fixed or movable and wherein said insertions determine the number of components.

Document D2 (see especially claims) discloses a porous matrix comprising channels which support the viability of cells, endothelial cells within the channels of the matrix, and means for detecting changes in the cells or in compounds exposed to the cells, and discloses as well a method for screening cellular effects of drugs using said system. D2 relates to a micromatrix network wherein cells are seeded and cultivated in order to obtain mimicked tissues or organs. D2 does not disclose the method of the present invention, wherein the cellular components are retained on the surface of the solid porous support and not present in the pore, nor the device and supply chamber as disclosed in present claims 38 and 49.

Document D3 (see especially claims, page 24 line 27 - page 25 line 27) discloses a system for performing hybridization assays comprising a cartridge for housing a flow through device, where the cartridge includes a test fluid chamber, and fluidics station to deliver the test fluid mixture to the cartridge. This document does not disclose a method for screening cellular responses comprising the provision of a solid support onto which cellular components are provided and which is in contact with a supply chamber opposite to the side onto which the cellular components are, nor the supply chamber of the present invention.

Document D4 discloses a device for performing an assay comprising a substrate having through-going channels that open out onto a surface for sample application, the channels being provided in at least one cross-sectional area with a first binding substance capable of binding a particular analyte. D4 does not disclose the supply chamber of the present invention and the use of said chamber in combination with a solid support as disclosed in the present claims.

The technical problem to be solved by the present invention is the provision of a devices and methods for cell-based high-throughput microarray assays. The known prior art, taken alone or in combination, provides no hint to the solution proposed by present claims 1-54.

Thus, present claims 1-54 meet the requirements as set forth in Articles 33(2) and (3) PCT.